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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,406	11/17/2003	Ruediger Ebeling	2920-117	2022
6449 7590 02/05/2007 ROTHWELL, FIGG, ERNST & MANBECK, P.C. 1425 K STREET, N.W. SUITE 800 WASHINGTON, DC 20005			EXAMINER NGUYEN, PHUNG	
			ART UNIT 2612	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		02/05/2007	ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 02/05/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

**Office Action Summary**

Application No.

10/714,406

Applicant(s)

EBELING ET AL.

Examiner

Phung T. Nguyen

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/06/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 8, 10-20, 24, 25, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Bailey (U.S. Pat. 5,705,747).

**Regarding claim 1:** Bailey discloses methods and system for scaleable liquid display and control comprising a housing arranged in the area of the operation of the liquid system, a display unit accommodated in the housing for optical display of information in electronic form, and actuating device accommodated by the housing for setting at least one parameter and a, particularly electronic, control unit for processing data and/or signals referring to the actual or set operating state of the liquid system (fig. 4, col. 3, lines 22-47, and col. 4, lines 44-54).

**Regarding claim 2:** Bailey discloses the housing is arranged in the outside area of the liquid system as seen in figure 3.

**Regarding claim 3:** Bailey inherently discloses the housing can be mounted on a wall or similar enclosing the liquid system, particularly in a recess in the wall as seen in figure 5.

**Regarding claim 4:** Bailey inherently discloses the housing can be mounted on the wall, or in the recess of wall, slightly projecting, flush or at least partially recessed relative to the area spanned by the wall, as seen in figure 5.

**Regarding claim 5:** Bailey inherently discloses the housing can be mounted on the wall or in a recess in the wall by means of captive screws as seen in figure 5.

**Regarding claim 8:** Bailey inherently discloses the housing id of encapsulated design, in particular temperature insulated as seen in figure 4.

**Regarding claim 10:** Bailey discloses the display unit is of electroluminescent or similar design, and in particular has a 1/4" VGA display with 320 x 240 pixels or similar display as seen in figure 4.

**Regarding claim 11:** Bailey discloses the display unit has graphics capability (col. 3, lines 45-47).

**Regarding claim 12:** Bailey discloses the display unit is divided into at least two display fields, in which the information to be displayed can be individually represented by enlargement, flashing at intervals or positive/negative arrangement of the font, pictures or similar corresponding to the particular information content (fig. 4, col. 3, lines 62-67, and col. 4, lines 1-10).

**Regarding claim 13:** Bailey discloses the display unit is divided into four display fields, in which the actual operating state and the set operating state, functional information, fault information and other service information can be displayed as seen in figure 4.

**Regarding claim 14:** Bailey discloses the display unit shows the current amount of liquid present in the liquid system or the current contents level as the actual operating state and the required amount of liquid to be provided in the liquid system or the required contents level as the set operating state (col. 3, lines 44-47).

**Regarding claim 15:** Bailey discloses the display unit shows the actual and/or set operating state of the liquid system in the form of a column, bar, arrow or as a numerical value or similar (col. 3, lines 44-54).

**Regarding claim 16:** Bailey discloses the display unit shows the actual operating state by means of a variable-height column or a variable-length bar, particularly, in steps of 1% and the set operating state by a moving arrow next to the column or under or above the bar, particularly in predetermined steps as seen in figure 4.

**Regarding claim 17:** Bailey discloses the display unit shows the information to be displayed in a language that can be individually activated as seen in figure 4.

**Regarding claim 18:** Bailey discloses the actuating device has at least one control element for selecting the at least one parameter (col. 4, lines 44-54).

**Regarding claim 19:** Bailey discloses the actuating device comprises at least two control elements acting in opposing directions, for setting the at least one parameter (col. 4, lines 51-54).

**Regarding claim 20:** Bailey discloses the control unit is mounted in the housing or in a different housing separate from it (fig. 2, col. 3, lines 22-24).

**Regarding claim 24:** Bailey discloses the control unit communicates with the liquid system through a data bus, particularly a Controller Area Network (CAN) bus or a RS485 bus as seen in figure 3.

**Regarding claim 25:** Bailey inherently discloses in a stationary liquid system of a building, building structure or similar or in a mobile liquid system of a land vehicles and/or aircraft and/or watercraft (col. 9, lines 32-40).

**Regarding claim 27:** Bailey discloses using of a device for optical representation and setting of the actual or set operating state of drinking and/or service water systems, fuel systems, in particular kerosene systems, disinfecting agent systems, drainage systems and wastewater system (col. 9, lines 32-40).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 7, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey (U.S. Pat. 5,705,747).

**Regarding claims 6 and 7:** Bailey does not teach the housing is of two-part construction, in particular comprising a mainly flat lower section and a partly cover-shaped upper section that are joined to each other by screws, and the screws for connecting the essentially flat lower section and partly cover-shaped upper section cannot be accessed from the outside of the housing as claimed. However, Bailey discloses the display as shown in figure 4. Therefore it would have been an obvious design choice to have the housing which has a mainly flat lower section and a partly cover-shaped upper section that are joined to each other by screws, and the screws for connecting the essentially flat lower section and partly cover-shaped upper section cannot be accessed from the outside of the housing if desired because they perform the same function.

**Regarding claim 26:** Bailey does not disclose in a liquid system of an aircraft, which in particular is mounted on the underneath of its fuselage. Since Bailey discloses the device can be used in a stationary liquid system of a building, it would be obvious to the skilled artisan to use the device of Bailey in a liquid system of an aircraft if needed.

5. Claims 9, 21, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey (U.S. Pat. 5,705,747) in view of Read et al. (U.S. Pat. 5,533,648).

**Regarding claim 9:** Bailey does not disclose the housing is allocated a heater for heating the inner space enclosed by the housing and/or a cooling device for cooling the inner space enclosed by the housing and for maintaining a constant temperature level therein. However, using a heater for heating the inner space enclosed by the housing and/or a cooling device for cooling the inner space enclosed by the housing and for maintaining a constant temperature level is old and well known in the art as taught by Read et al. (col. 6, lines 44-49). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the technique of Read et al. in the system of Bailey in order to enhance the system by maintaining a constant temperature level.

**Regarding claim 21:** Refer to claims 1 and 9 above.

**Regarding claim 22:** Read et al. disclose the control unit includes the heater allocated to the housing (fig. 4, col. 6, lines 39-49).

**Regarding claim 23:** Read et al. disclose the control unit includes a further heater that is directly allocated to the components of the control unit (col. 6, lines 49-59).

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Luzzader [U.S. Pat. 6,014,076] discloses apparatus and method for achieving intrinsic safety using conventional sensors.

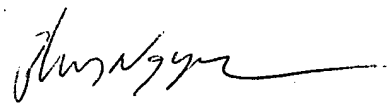
b. Egidio [US 2003/0219062] discloses system and method for temperature sensing and monitoring.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung Nguyen whose telephone number is 571-272-2968. The examiner can normally be reached on Monday to Friday from 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J Wu, can be reached on 571-272-2964. The fax phone number for this Group is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 571-272-2600.

Date: January 25, 2007

  
Phung Nguyen